

REMARKS

Claims 1, 2 and 4-12 are pending in the above-identified application. Claim 3 has been inserted into claim 1 (except for the material "ionomer resin") and correspondingly cancelled.

Request for Entry of Claim Changes

It is respectfully requested that the insertion of claim 3 into claim 1 be entered of record and fully considered by the Patent Examiner under 37 C.F.R. 1.116. It is submitted that no significant new issues are raised, since the embodiments of original claim 3 (which depended from original claim 1) have already been considered. In addition, these changes at least place the claims into better form for consideration on appeal, should an appeal be necessary. Consequently, it is submitted that these changes are proper and should be entered of record under 37 C.F.R. 1.116.

Allowable Claims 5 and 6

It is noted that claims 5 and 6 have been indicated as being in allowable form and have merely been objected to as depending upon a rejected base claim (i.e. claim 1).

Issues Under 35 U.S.C. 102(b) and 103(a)

Claims 1-4 and 7-11 have been rejected under 35 U.S.C. 102(b) as anticipated by Nesbitt '193 (USP 4,431,193).

Claim 12 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Nesbitt '193 in view of Sullivan '871 (USP 6,520,871).

It is noted that claim 3 has been inserted into claim 1 and correspondingly cancelled. These rejections are traversed for the following reasons.

Present Invention and Its Advantages

The golf ball of the present invention includes the following significant features: [i] the golf ball is a multi-piece "solid" golf ball which excludes "wound" golf balls; [ii] the intermediate layer employs both the elongation (penetration) range of 9 - 20 mm and a flexural stiffness range of 300 - 2000 MPa; [iii] the intermediate layer material is selected from the group consisting of polyurethane-based thermoplastic elastomer, polyamide-based thermoplastic elastomer, polycarbonate resin, polyacetal resin, and a modified compound thereof; and [iv] the cover is formed from a thermoplastic resin.

With regard to the elongation feature [ii], it is noted that the technical meaning of limiting the elongation when applying the maximum load in penetration and impact fatigue tests in the present

invention is described in paragraphs [0002] to [0009] and [0016], particularly in paragraph [0016] of the specification of the present application. The test method is described in paragraph [0062] and Fig. 1. The elongation when applying the maximum load in penetration and impact fatigue tests is the most important feature in the present invention as described therein. Other advantageous associated with the intermediate layer are described in paragraph [0016] at pages 7-8 of the specification.

The golf ball of the present invention overcomes problems associated with conventional golf ball designs which employed materials exhibiting high flexural modulus or high hardness properties for the intermediate layer, in combination with a soft cover and a soft core or center. However, such conventional designs disadvantageously result in a concentration of the stress caused by striking the golf ball to be placed primarily on the intermediate layer, such that the durability of the intermediate layer was degraded. This degradation is evidenced by the use of a hard intermediate layer in the golf ball of Japanese Patent Kokai Publication No. 239068/1997 as noted in paragraph [0016] of the specification. Consequently, the inventor of the present application has discovered that durability may be advantageously improved by forming the intermediate layer from a material which has a high hardness and large elongation properties. The inventor has discovered that the penetration mode, not a tensile mode, is

most appropriately selected for an impact test in order to correlate most appropriately with the impact phenomenon when a golf ball is hit by a golf club corresponding to a middle iron through a driver club. Thus, the inventor has discovered that the appropriate combination of the elongation and flexural stiffness properties of feature [ii] in combination with the other features [i], [iii] and [iv], results in the advantageous properties achieved by the golf ball of the present invention.

Employment of the above-noted combination of features provides for unexpected, advantageous properties as evidenced by the Comparative Test Results in the present specification. For example, Example Nos. 1-4 (present invention), shown in Table 4 at paragraph [0064] exhibit advantageously improved flight performance properties over Comparative Example in Nos. 1-3, described in Table 5 at paragraph [0065] of the specification. Note that, even though Comparative Example Nos. 1 and 2 have appropriate flexural stiffness properties, because these comparative examples have elongation (penetration) properties below the lower end point of the range of the present invention, the resulting golf balls exhibit inferior disadvantageous flight performance properties. Also, Comparative Example No. 3 is a golf ball, which includes an intermediate layer having appropriate elongation (penetration) properties, but flexural stiffness properties below the range of the present invention, which results in the inferior flight

performance properties. Thus, unless both the elongation (penetration) and flexural stiffness property ranges are employed, the resulting golf ball fails to exhibit the advantageously improved flight performance properties of the golf balls of the present invention.

Distinctions between Present Invention and Nesbitt '193

Nesbitt '193 discloses a golf ball which includes an inner layer **14**, wherein this inner layer may be formed of a hard, high flexural modulus resinous material, such as Surlyn resin type 1605, with a thickness in the range of 0.020-0.070 inches, as noted at column 3, lines 16-25. The Final Office Action asserts that the various possible ionomer resins listed on page 17 of the present specification include an example which corresponds to Surlyn 1605 as disclosed by Nesbitt '193.

Nesbitt '193 fails to disclose a golf ball having an intermediate layer which is not formed from an ionomer, such as Surlyn 1605 or "Hi-milan 1605". In contrast, as recited in present claim 1, the intermediate layer is formed from a material listed in accordance with feature [iii]. Further, Nesbitt '193 fails to disclose or suggest the elongation/flexural stiffness feature [ii] of the golf ball of the present invention. Therefore, significant patentable distinctions exist between the present invention and Nesbitt '193. In this regard, it is submitted that Nesbitt '193

fails to support any assertion of *prima facie* obviousness because Nesbitt '193 fails to disclose at least the elements recited in the present claims. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In addition to the above, it is submitted that the comparative test results reported in the present specification and described above rebut any allegation of *prima facie* obviousness based on Nesbitt '193. The selection of materials and processing conditions affect the properties of these materials, such that it cannot merely be concluded that because the starting materials may overlap the resulting produced polymers have the same properties. Specifically, as evidenced by the comparative test results discussed above in the present specification, the selection of an intermediate layer having flexural stiffness properties within the range of the present invention, such as Comparative Examples 1 and 2, fails to provide a golf ball exhibiting the advantageous properties of the golf ball of the present invention, if the elongation properties are not selected correctly. Consequently, significant patentable distinctions exist between the present invention and Nesbitt '193. Further, even if a *prima facie* case of obviousness argument has been properly alleged, such obviousness has been rebutted by the comparative test results discussed above. Thus, the above-noted rejections should be withdrawn.

Absence of Basis for Alleging "Inherency"

It appears that the Final Office Action may be attempting to rely upon a theory that the properties of the golf ball materials of Nesbitt '193 "inherently" overlap with the properties of the golf ball embodiments of the present invention. However, as noted in MPEP 2163.07(a),

To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

In the present situation, the Nesbitt '193 reference is, at best, a disclosure of a variety of materials which provide a "possibility" of attaining the selected elongation/flexural stiffness properties employed in the golf ball of the present invention. This falls far short of establishing inherency.

Distinctions between Present Invention and Sullivan '871

Sullivan '871 is farther removed from the present invention than Nesbitt '193 and is cited for the disclosure of the use Surlyn 1855 in the cover which has a Shore D hardness of 53 or less. The Examiner asserts that Sullivan '871 may be combined with Nesbitt '193.

All of the above-noted distinctions between the present invention and Nesbitt '193 also apply to Sullivan '871. Even if Sullivan '871 were to be hypothetically combined with Nesbitt '193, all of the above-noted deficiencies in connection with the assertion of obviousness would still exist. Thus, significant patentable distinctions exist between the present invention and Sullivan '871, whether taken alone or combined with Nesbitt '193.

#### Conclusion

It is submitted, for the reasons stated above, that all of the presently pending claims define patentable subject matter, such that the present application should be placed into condition for allowance.

If any questions arise regarding the above-matters, please contact applicant's representative, Andrew D. Meikle, in the Washington metropolitan area at the telephone number listed hereinbelow.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew D. Meikle (Reg. No. 32,868) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.



If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

Andrew D. Meikle, #32,868

ADM:gmh  
0020-5221P

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000